

**REMARKS**

Claims 15-22, 33-35, 51-67 and 84-109 are pending. Claims 15-22, 33-35, 51-54, 84-90, 106 and 109 are under examination. Claims 104, 105, 107 and 108 are canceled herein without prejudice to Applicants pursuing these claims in a related application. Claims 15-22, 106 and 109 have been amended. Support for the amendments can be found throughout the specification and the claims as filed. In particular, support for the amendment to claims 15-22 can be found, for example, on page 10, lines 17-25. Support for the amendment to claim 106, which incorporates the language of claims 104 and 105, and claim 109, which incorporates that language of claims 107 and 108, can be found in original claim 78. Accordingly, these amendments do not raise an issue of new matter and entry thereof is respectfully requested.

**Regarding the Restriction Requirement**

The Office Action indicates that the Restriction Requirement is maintained and that claims 55-67, 91-105, 107 and 108 have been withdrawn from examination. The Office Action requests cancellation of non-elected claims. Claims 104, 105, 107 and 108 have been cancelled.

Regarding the remaining withdrawn claims, claims 55-67 and 91-103, Applicants respectfully request rejoinder of these process claims, which depend from and include all the limitations of product claims 15 and 19. For the reasons discussed below, Applicants believe that product claims 15 and 19 are allowable. As indicated on page 5 of the Restriction Requirement mailed May 5, 2004:

Where applicant elects claims directed to the product, and a product claims is subsequently found allowable, withdrawn process claims that depend from or otherwise include all the limitations of the allowable product claim will be rejoined in accordance with the provisions of MPEP § 821.04. **Process claims that depend from or otherwise include all the limitations of the patentable product** will be entered as a matter of right if the amendment is presented prior to final rejection or allowance, whichever is earlier.

For the reasons and amendments discussed below, Applicants believe that product claims 15 and 19 are allowable. Accordingly, Applicants respectfully request rejoinder of process claims 55-67 and 81-103, which include all the limitations of the allowable product claims.

Objection to the Specification

The Office Action indicates that the specification is objected to because of an alleged lack of reference to the earlier filed application. Applicants draw the Examiner's attention to the Preliminary Amendments filed March 8, 2002, and February 28, 2003. In particular, the Preliminary Amendment filed March 8, 2002, inserted the following paragraph reciting the priority claim.:

This application is a U.S. national stage application of international application No. PCT/US00/12842, which has an international filing date of May 10, 2000, and which claims priority to U.S. application serial No. 09/309,487, filed May 10, 1999.

Thus, the priority claim was amended within four months of the filing date of the above-identified U.S. national stage application, November 9, 2001. In the Preliminary Amendment filed February 28, 2003, the record was further clarified to be consistent with the priority claim by explicitly indicating that the application is not a continuation-in-part application, and should not be treated as such under PCT Rule 4.14, but should, nevertheless, be considered to expressly maintain the priority claim to U.S. application Ser. 09/309,487 under PCT Rule 4.10 and PCT Article 8(1).

As requested by the Examiner, the first paragraph has been amended to update the priority claim to reflect issuance of the priority application as a U.S. patent. Accordingly, Applicants respectfully request that this objection be withdrawn.

Objection to the Claims

Claims 106 and 109 are objected to for depending from a withdrawn claim. Claim 106 has been amended to incorporate claims 104 and 105, and claim 109 has been amended to incorporate claims 107 and 108. Accordingly, Applicants respectfully request that this objection be withdrawn.

Double Patenting Rejections

The provisional rejection of claims 15-22, 33-35, 51-54, 84-90, 106 and 109 under the judicially created doctrine of obviousness-type double patenting as allegedly unpatentable over claims 1-3, 23-25, 41-44 and 68 of co-pending application serial No. 10/313,994 (US 2003/0162718

A1) is respectfully traversed. Applicants respectfully request that this rejection be held in abeyance until there is an indication of allowable subject matter. If the present application is deemed allowable prior to serial No. 10/313,994, Applicants respectfully request that this provisional rejection be withdrawn.

The provisional rejection of claims 15-22, 33-35, 51-54 and 84-90 under the judicially created doctrine of obviousness-type double patenting as allegedly unpatentable over claims 1, 16 and 17 of co-pending application serial No. 10/427,715 (US 2004/0014669 A1) is respectfully traversed. Applicants respectfully request that this rejection be held in abeyance until there is an indication of allowable subject matter. If the present application is deemed allowable prior to serial No. 10/427,715, Applicants respectfully request that this provisional rejection be withdrawn.

The rejection of claims 15-22, 33-35 and 84-86 under the judicially created doctrine of obviousness-type double patenting as allegedly unpatentable over claims 1 and 23-25 of U.S. Patent No. 6,335,318 is respectfully traversed. Applicants respectfully submit that claims 15-22, 33-35 and 84-86 of the present application, at best, could be viewed as directed to species of generic claims 1 and 23-25 of U.S. Patent No. 6,335,318. Therefore, Applicants respectfully submit that claims 15-22, 33-35 and 84-86 of the present application are unobvious over claims 1 and 23-25 of U.S. Patent No. 6,335,318. Accordingly, Applicants respectfully request that this rejection be withdrawn.

The rejection of claims 106 and 109 under the judicially created doctrine of obviousness-type double patenting as allegedly unpatentable over claim 12 of U.S. Patent No. 6,514,727 is respectfully traversed. Applicants respectfully submit that claims 106 and 109 of the present application, at best, could be viewed as directed to species of generic claim 12. Therefore, Applicants respectfully submit that claims 106 and 109 of the present application are unobvious over claim 12 of U.S. Patent No. 6,514,727. Accordingly, Applicants respectfully request that this rejection be withdrawn.

#### Rejections Under 35 U.S.C. § 101

The rejection of claims 15-22 under 35 U.S.C. § 101 as allegedly being directed to non-statutory subject matter is respectfully traversed. Applicants have amended claims 15-22 to recite

the term “isolated” as requested by the Examiner. Accordingly, Applicants respectfully request that this rejection be withdrawn.

Rejections Under 35 U.S.C. § 112, Second Paragraph

The rejection of claims 15-22, 33-35, 51-54, 84-90, 106 and 109 under 35 U.S.C. § 112, second paragraph, as allegedly indefinite is respectfully traversed. Applicants respectfully submit that the claims, as amended, are clear and definite.

With respect to the discrepancy between the computer readable form (CRF) of the Sequence Listing and the SEQ ID NOS in the claims, claims 15 and 19 have been amended to recite SEQ ID NO: 32 and 33, respectively. Applicants bring to the Examiner’s attention that the Preliminary Amendment filed February 28, 2003, which included the filing of the Sequence Listing, also included the same amendment to claims 15 and 19 to correspond with the Sequence Listing. However, when the response to the Restriction Requirement was filed September 7, 2004, this previous amendment was inadvertently omitted from the Listing of Claims. Applicants representative apologies for any confusion.

Applicants point out that SEQ ID NOS: 32 and 33 are amino acid sequences, as now referenced in claims 15 and 19, respectively. Accordingly, Applicants submit that the claims are clear and definite and respectfully request that this rejection be withdrawn.

In light of the amendments and remarks herein, Applicants submit that the claims are now in condition for allowance and respectfully request a notice to this effect. The Examiner is invited to call the undersigned agent if there are any questions.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 502624 and please credit any excess fees to such deposit account.

Respectfully submitted,

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